

REMARKS

Applicant respectfully requests reconsideration of this application as amended. Claims 1, 4-7, 10-12, 14-15, 17-20 remain in the application. Claims 1, 4, 6-7, 10, 12, 14-15, 17 and 19-20 have been amended. Claims 2, 8, 13 and 16 have been canceled.

I. EXAMINER INTERVIEW

Applicant appreciates the Examiner conducting the interview on October 6, 2008 at which the 103 rejection was discussed - particularly Kanfi.

II. CLAIM REJECTIONS – 35 U.S.C. § 103

Claims 1, 2, 4-8 and 10-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2007/0124794 to Marko et al., (hereinafter “Marko”) in view of U.S. Patent No. 5,559,991 to Kanfi (hereinafter “Kanfi”) in view of U.S. Patent Publication No. 2003/0217083 to Taylor (hereinafter Taylor).

Backup systems have existed for some time. They typically involve client applications stored on the machines to be backed up (computers), a backup server to aggregate the streams sent from the client applications, and then the backup system sends the aggregate to the storage medium (storage server). Typically, the client applications and backup server operate (generate streams for storage) in a manner consistent with the storage medium used (e.g., when tape is used, the client applications and backup systems include tape markers in the streams – this is called administrative data).

Problems arise when it is desirable to replace the storage medium with a more efficient storage medium. A solution is to replace the whole backup system (client applications, backup

server, and storage medium); Kanfi's system requires replacement of the whole system, including client applications).

Applicant's claim 12 allows for replacement of a storage medium with a different and more efficient storage mechanism (a segment reuse system), but without requiring a replacement of the rest of the backup system (client applications and backup server software – compare Kanfi), while at the same time allowing for efficient use of the segment reuse system (through the claimed decomposition/recomposition). Specifically, the segment reuse system with decomposition/recomposition removes a prior backup system's storage medium specific administrative data in the received streams (from the backup server) prior to storage, and then replaces it (prior to restoring those streams to the backup server). This decomposition/recomposition allows the segment reuse to work more efficiently than if that administrative data had been left in the streams, while at the same time allows for interoperability with the remaining part of existing (and likely already installed) backup systems. Thus, it allows for interoperability (Kanfi's system requires replacement of the client applications), while at the same time improves efficiency in comparison to a solution that simply replaces the old storage medium with a segment reuse system (compare figures 1, 7A and 7B).

A person of ordinary skill in the art would not recognize to combine the reference provided in this manner to achieve this result. A person of ordinary skill might do as instructed by Kanfi (complete replacement). Alternatively, a person of ordinary skill in the art may keep the existing backup system and simply replace the storage medium with a segment reuse storage system. In the later case, a person of ordinary skill in the art would not recognize the lack of efficiency due to the administrative data. A study of the figure 1, 7a, and 7b show its recognition to be non-trivial as the system would still function. Particularly, a person of ordinary skill in the

art when viewing Marko (a reference pertaining to broadcasting audio and video) would not conclude the combination of the rejection. Marko is in a different field, and is decomposing at the point of listening/watching. In the case of Applicants specification, the decomposing/recomposing is undoing the work of the rest of the backup system did (the admin data) at a location where it is not expected to be undone. As such, Applicant respectfully submits that one of ordinary skill in the art would not have recognized the idea of decomposing/recomposing as described, would not have looked at Marko, and if had looked at Marko would not have recognized the idea of decomposing/recomposing as described.

The other independent claims have limitations that also overcome the prior art. Claim 7 is not limited to a backup system, but has been amended to require “receiving over time, at a storage server having a composite data stream decomposer/recomposer and a segment reuse storage system, a plurality of composite data streams from a server..., wherein the server receives the data streams from the client applications, wherein the client applications and/or server insert into the data streams administrative data that is expected upon restore and that if kept in the data streams would results in a relatively low compression efficiency of the segment reuse storage system” and, as part of the “decomposing” “storing a composite data stream map that indicates storing a composite data stream map that indicates how to recompose the plurality of constituent data streams into the composite data stream.”

Claim 15 was previously amended to include “computer hardware including the following components” to overcome a 101 rejection. Applicant has replaced this amendment with “a storage server including” to be clear that the below claim elements are not required to each be implemented in hardware. Applicant believes claim 15 is directed at statutory subject matter in that it is directed at a storage server. Also, Applicant’s claim 15 has been amended to

require that: 1) the composite data stream decomposer/recomposer is to decompose the composite data streams also into “composite data stream maps, the composite data stream maps indicate how to recompose their corresponding composite data streams from their constituent data streams,” and is to “recompose composite data streams from their constituent data streams and their composite data stream maps;” and 2) to include a map file storage … to store the composite data stream maps.”

As part of the claim 1’s “decomposing,” an amendment has been made to add “storing a composite data stream map that indicates how to recompose the plurality of constituent data streams into the composite data stream” and amendments have been made to clarify the “segmenting.”

Each of the dependent claims is allowable for at least the reason that the independent claim from which they depend is allowable.

CONCLUSION

Applicant respectfully submits that all rejections have been overcome by the remarks and that all pending claims are in condition for allowance. Accordingly, Applicant respectfully requests withdrawal of the claim rejections.

Invitation for a telephone interview

If a telephone conference would facilitate the prosecution of this application, Examiner is invited to contact Dan De Vos at (408) 720-8300. If there are any additional charges, please charge them to our Deposit Account Number 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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